

DRILL HOLES

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BORDER REV: DATE: June 11, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with street lighting at the intersection of US 40 and Joppa Road in Harford County. The Exclusive/Permissive left turn phases along US 40 shall be changed to an Exclusive left turn phases. US 40 is assumed to run an east-west direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA six-phase, fully-actuated mode, with the US 40 approaches running concurrently. Exclusive left turn phases shall now be provided for both approaches of US 40. The Joppa Road approaches shall continue to run concurrently.
- The existing full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.

III. SPECIAL NOTES

- The Signal Shop shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop.

The contact persons for District #4 are as follows:

Mr. Randall Scott  
Assistant District Engineer - Traffic  
Phone: (410) 321-2781

Mr. Steve Marolszewski  
Assistant District Engineer - Maintenance  
Phone: (410) 321-2761

Mr. Michael Pasquariello  
Assistant District Engineer - Utility  
Phone: (410) 321-2841

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

Mr. Ed Rodenhizer  
Signal Shop  
410-787-7652

Mr. Sonny Bailey  
Sign Shop  
410-787-7670

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

| ITEM NO. | DESCRIPTION  | QUANTITY      |
|----------|--|---------------|
| 9571     | Sheet aluminum signs to consist of:<br>(mast arm or pole mount)<br>R10-10L "LEFT TURN<br>SIGNAL" sign. (24"X30") | 10 SF<br>2 EA |

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE SIGNAL SHOP

| ITEM NO. | DESCRIPTION  | QUANTITY |
|----------|--|----------|
| 1001     | Maintenance of traffic per assignment.                   | 1 EA     |
| 8002     | 12" red or green LED signal head section.                | 16 EA    |
| 8003     | 12" yellow LED signal head section.                      | 8 EA     |
| 8028     | Remove and dispose of existing equipment per assignment. | 1 EA     |
| 8064     | Install overhead mounted sign.                           | 10 SF    |
| 8079     | Electrical cable - 7 conductor (No. 14 AWG).             | 410 L.F. |

C. EQUIPMENT TO BE REMOVED

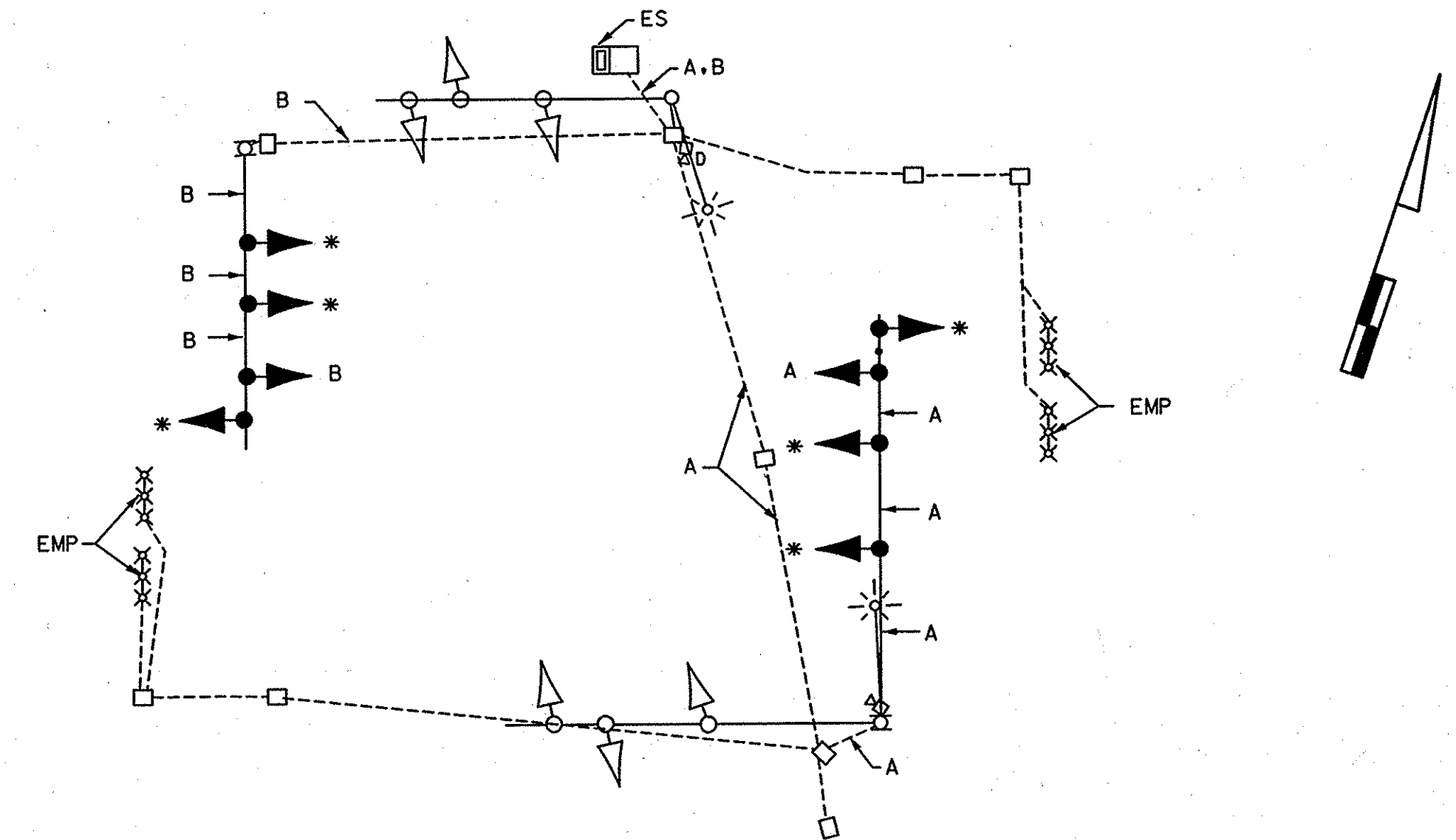
All removed signal materials are to become property of the Contractor.

PHASE CHART

|   | 1     | 2     | 3    | 4    | 5     | 6     | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   |
|---|-------|-------|------|------|-------|-------|------|------|------|------|------|------|------|------|
|   |       |       |      |      |       |       |      |      |      |      |      |      |      |      |
| PHASE 1 & 5                             | ←G    | ←G    | R    | R    | ←G    | ←G    | R    | R    | R    | R    | R    | R    | R    | R    |
| CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6 |       |       |      |      |       |       |      |      |      |      |      |      |      |      |
| PHASE 1 & 6                             | ←G    | ←G    | G    | G    | ←R    | ←R    | R    | R    | R    | R    | R    | R    | R    | R    |
| 1 & 6 CHANGE                            | ←Y    | ←Y    | G    | G    | ←R    | ←R    | R    | R    | R    | R    | R    | R    | R    | R    |
| PHASE 2 & 5                             | ←R    | ←R    | R    | R    | ←G    | ←G    | G    | G    | R    | R    | R    | R    | R    | R    |
| 2 & 5 CHANGE                            | ←R    | ←R    | R    | R    | ←Y    | ←Y    | G    | G    | R    | R    | R    | R    | R    | R    |
| PHASE 2 & 6                             | ←R    | ←R    | G    | G    | ←R    | ←R    | G    | G    | R    | R    | R    | R    | R    | R    |
| 2 & 6 CHANGE                            | ←R    | ←R    | Y    | Y    | ←R    | ←R    | Y    | Y    | R    | R    | R    | R    | R    | R    |
| PHASE 4 & 8                             | ←R    | ←R    | R    | R    | ←R    | ←R    | R    | R    | G    | G    | G    | G    | G    | G    |
| 4 & 8 CHANGE                            | ←R    | ←R    | R    | R    | ←R    | ←R    | R    | R    | Y    | Y    | Y    | Y    | Y    | Y    |
| FLASHING OPERATION                      | FL/←R | FL/←R | FL/Y | FL/Y | FL/←R | FL/←R | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R |

NOTE: SIGNAL HEADS 1-2-5 & 6 SHALL FLASH "RED ARROW" FROM 9 PM TO 6 AM

WIRING DIAGRAM



WIRING KEY

- A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- \* - USE EXISTING CABLE
- EMP - MICROLOOP LEAD-IN CABLE
- ES - EXISTING SERVICE TO BE MAINTAINED BY BGE

SHA

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

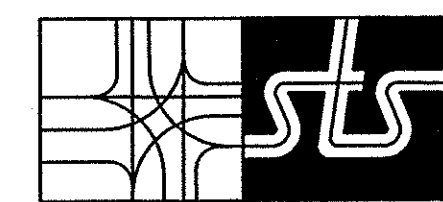
US 40 AND JOPPA ROAD

GENERAL INFORMATION SHEET

SCALE NONE DATE 9/29/06 CONTRACT NO. SIGNAL SHOP

DESIGNED BY J. ALLEN COUNTY HARFORD  
DRAWN BY R.C. LOGMILE 1200400J3  
CHECKED BY TMS NO. H804  
F.A.P. NO. TOD NO.

TS NO. 3727D DRAWING NO. 2 OF 2 SHEET NO. OF



STREET TRAFFIC STUDIES, LTD.  
400 Crain Hwy., NW  
Glen Burnie, MD 21061

Ph (410) 590-5500  
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